

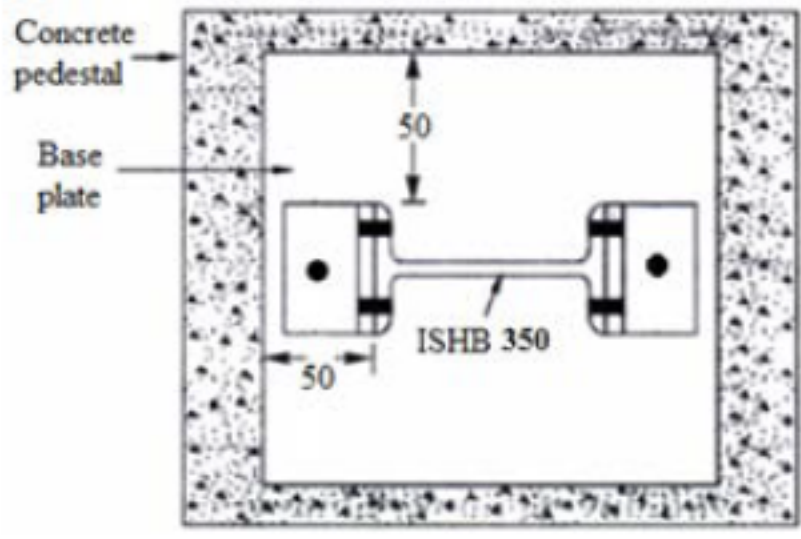
Unit 14 - Week 12

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Assignment 12

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2019-10-23, 23:59 IST.

- 1) Calculate the factored load transferred to the gantry girder through single wheel. 2 points
- Span of crane girder = 20 m
Self-weight of crane girder excluding trolley = 200 kN
Crane capacity = 250 kN
Self-weight of trolley, hook and electric motor = 50 kN
Minimum hook approach = 1.5 m
- a. 378 kN
b. 189 kN
c. 283 kN
d. 200 kN
- a.
 b.
 c.
 d.
- No, the answer is incorrect.
Score: 0
Accepted Answers:
c.
- 2) The span of agantry girder = 6 m (Hand Operated Crane). The factored load of a single wheel = 250 kN. The distance between two wheels = 3 m. What is the maximum factored moment due to vertical loads including impact? (Neglect self-weight of girder) 4 points
- a. 500 kN
b. 321 kN
c. 421 kN
d. 464 kN
- a.
 b.
 c.
 d.
- No, the answer is incorrect.
Score: 0
Accepted Answers:
d.
- 3) The most suitable and economic base for lightly loaded column is: 1 point
- a. Slab base
b. Gusseted base
c. Both (a) and (b)
d. None of this
- a.
 b.
 c.
 d.
- No, the answer is incorrect.
Score: 0
Accepted Answers:
a.
- 4) In case of an axially loaded column machined for full bearing, the fasteners connecting the column to the base plate in gusseted base are designed for 1 point
- a. Erection loads only
b. 25% of the column load
c. 50% of the column load
d. 100% of the column load
- a.
 b.
 c.
 d.
- No, the answer is incorrect.
Score: 0
Accepted Answers:
c.
- 5) As per IS 800: 2007 the maximum bearing pressure between the base plate and the support below should not exceed: 1 point
- a. $0.40 f_{ck}$
b. $0.45 f_{ck}$
c. $0.50 f_{ck}$
d. $0.60 f_{ck}$
- a.
 b.
 c.
 d.
- No, the answer is incorrect.
Score: 0
Accepted Answers:
d.
- 6) A column ISHB 350 @ 710.2 N/m ($t_f = 11.6$ mm, $t_w = 10.1$ mm, $D = 350$ mm, $b_f = 250$ mm) is subjected to a factored axial compressive load of 1400 kN. A base rest on concrete pedestal of grade M 25 as shown in the figure. The thickness of the slab will be 4 points
- 
- a. 12 mm
b. 14 mm
c. 16 mm
d. 18 mm
- a.
 b.
 c.
 d.
- No, the answer is incorrect.
Score: 0
Accepted Answers:
b.
- 7) A column section carries a factor axial compressive load of 1000 kN and factored bending moment of 100 kN-m. If a square base plate having 400 mm sides is provided, then the base plate will experience 3 points
- a. compression throughout
b. most part is in under compression
c. part of the plate will be in compression with substantial tension.
d. none of this
- a.
 b.
 c.
 d.
- No, the answer is incorrect.
Score: 0
Accepted Answers:
b.
- 8) A column carries a factor axial compressive load of 1200 kN and factored bending moment of 70 kN-m. If a base plate with the length of 400 mm and width of 500 mm is provided, then the maximum and minimum pressure experienced by the plate will be 4 points
- a. 12.2 N/mm^2 and 7.2 N/mm^2
b. 7.2 N/mm^2 and 2.2 N/mm^2
c. 10.2 N/mm^2 and 1.8 N/mm^2
d. 12.2 N/mm^2 and 10.2 N/mm^2
- a.
 b.
 c.
 d.
- No, the answer is incorrect.
Score: 0
Accepted Answers:
c.